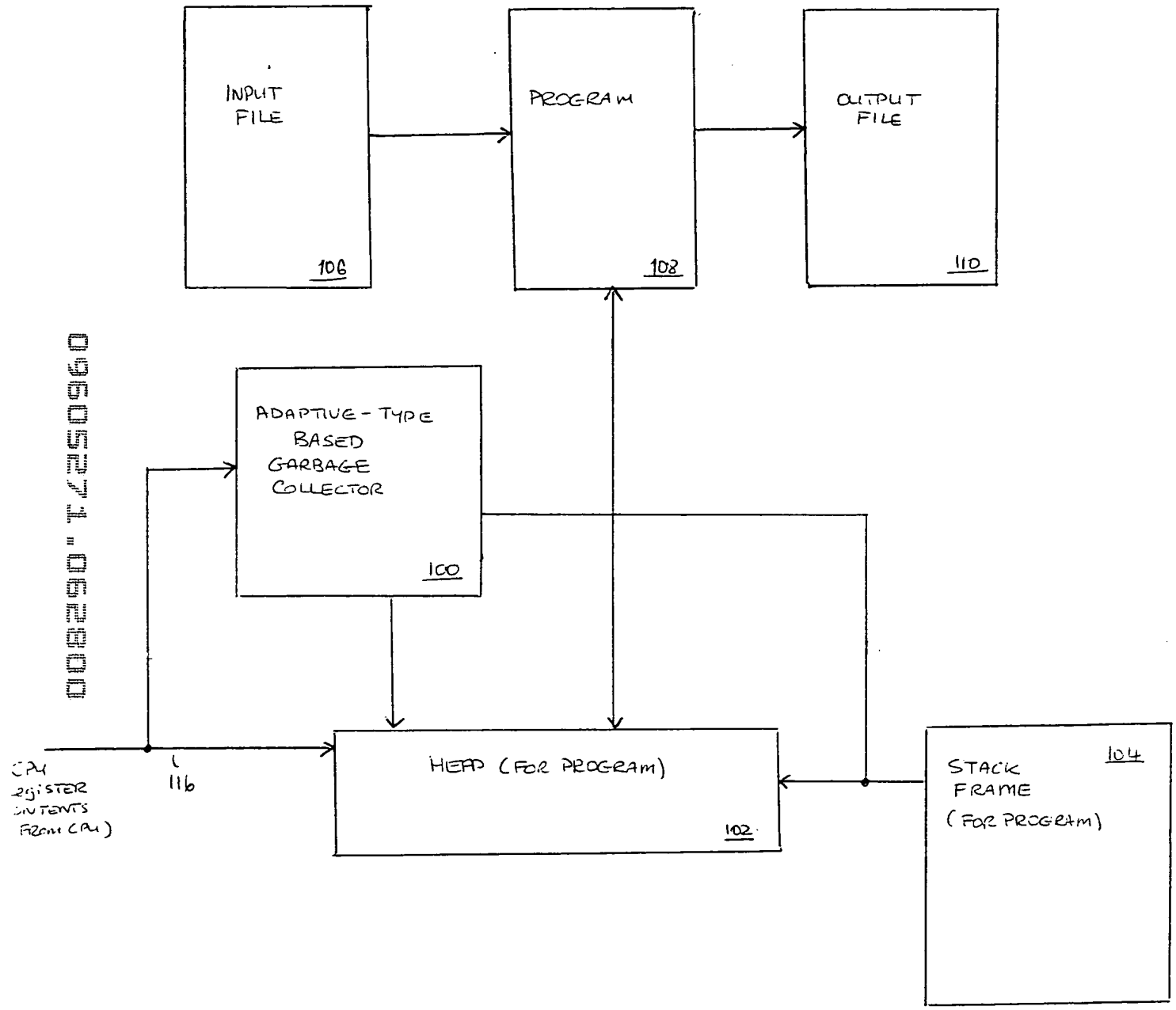

INPUT FILE
106
PROGRAM
108
OUTPUT FILE
110
ADAPTIVE-TYPE BASED GARBAGE COLLECTOR
100
HEAP (FOR PROGRAM)
102
STACK FRAME (FOR PROGRAM)
104
116
CPU REGISTER CONTENTS FROM CPU

FIG. 1

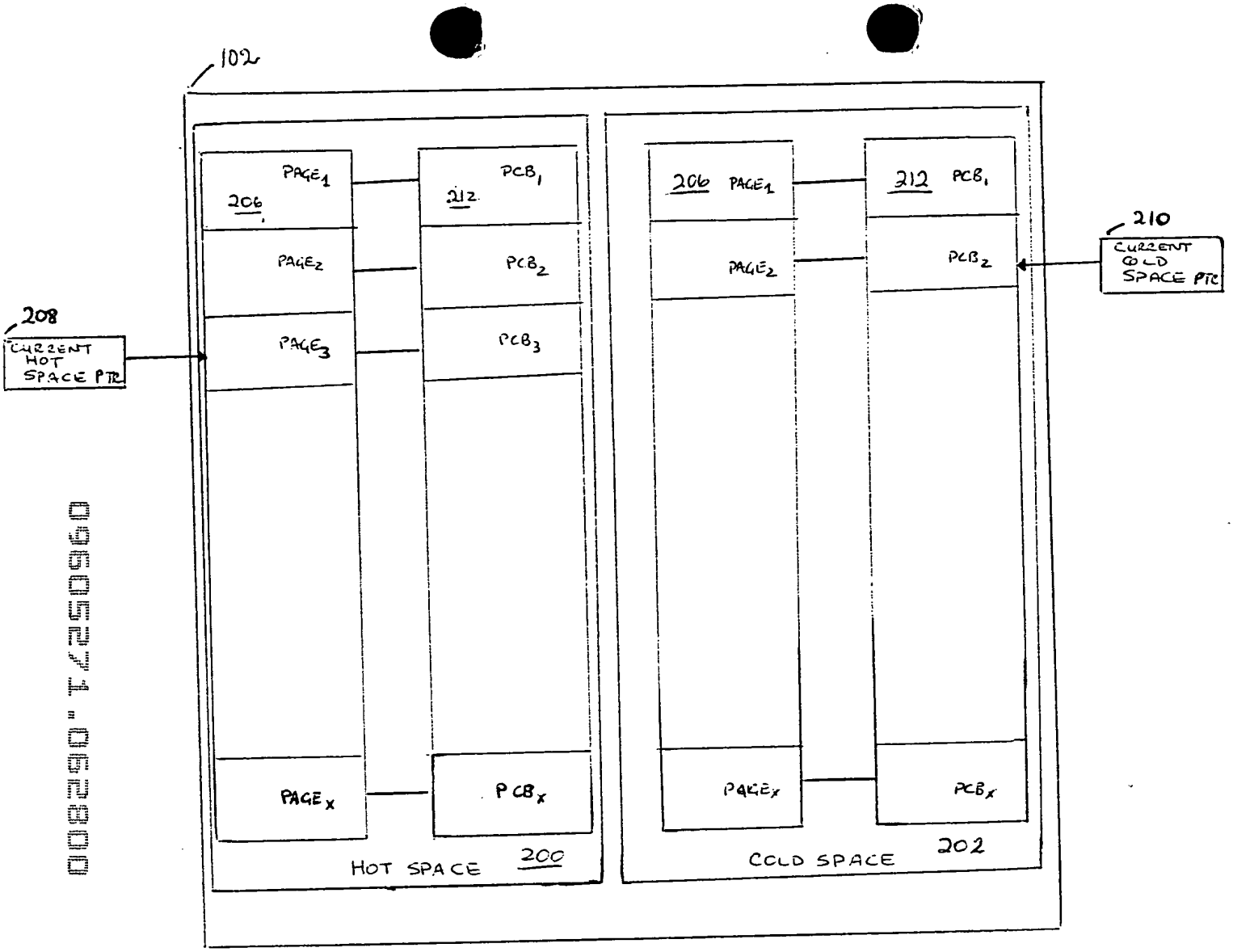

102
PAGE1
206
PCB1
212
PAGE2
PCB2
PAGE3
PCB3
PAGEX
PCBX
HOT SPACE
200
206 PAGE1
212 PCB1
PAGE2
PCB2
PAGEX
PCBX
COLD SPACE
202
208
CURRENT HOT SPACE PTR
210
CURRENT COLD SPACE PTR

FIG. 2

0960527.060800

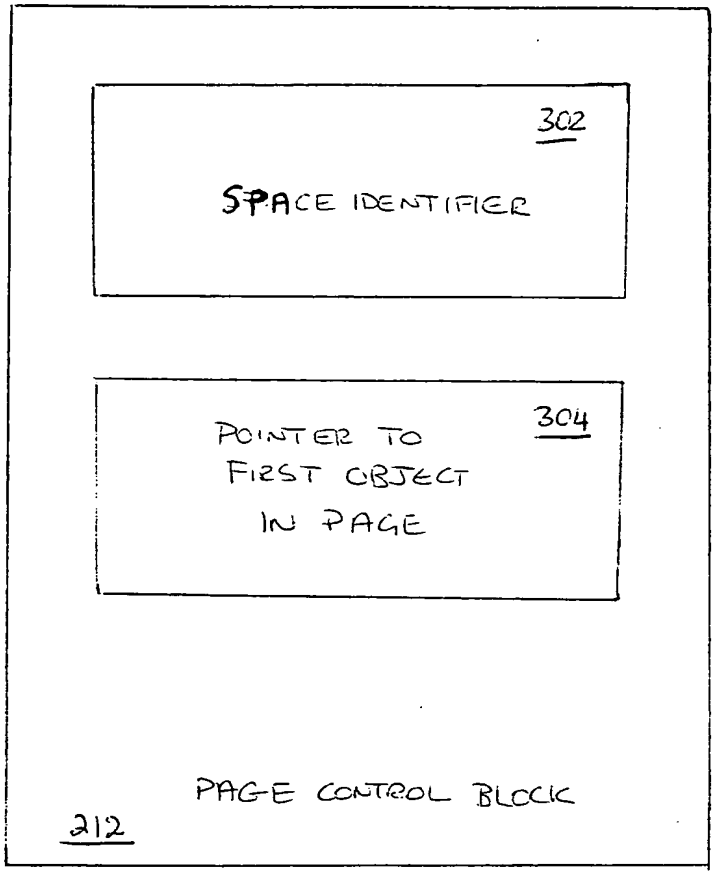


FIG. 3

09605271.060800

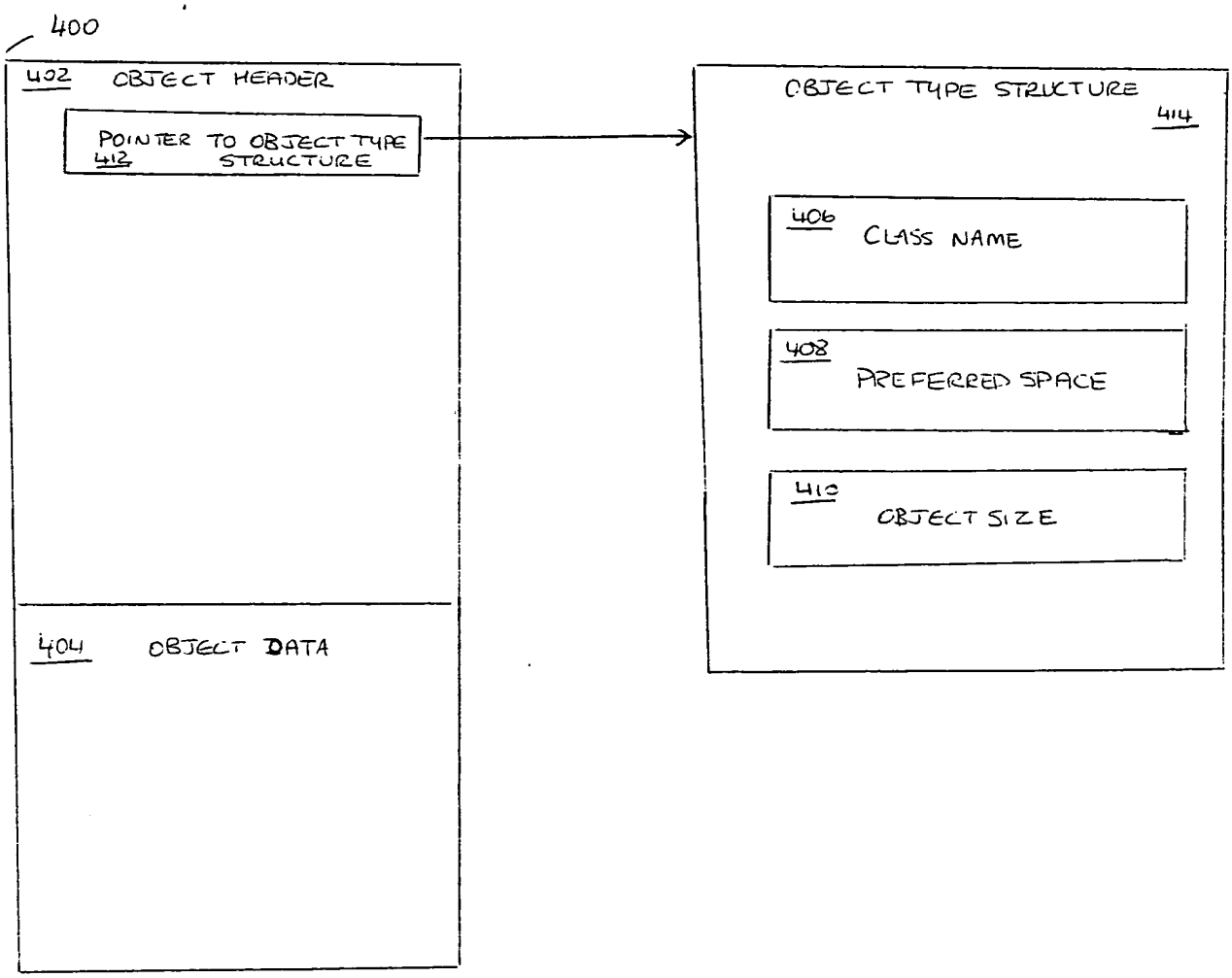


FIG. 4

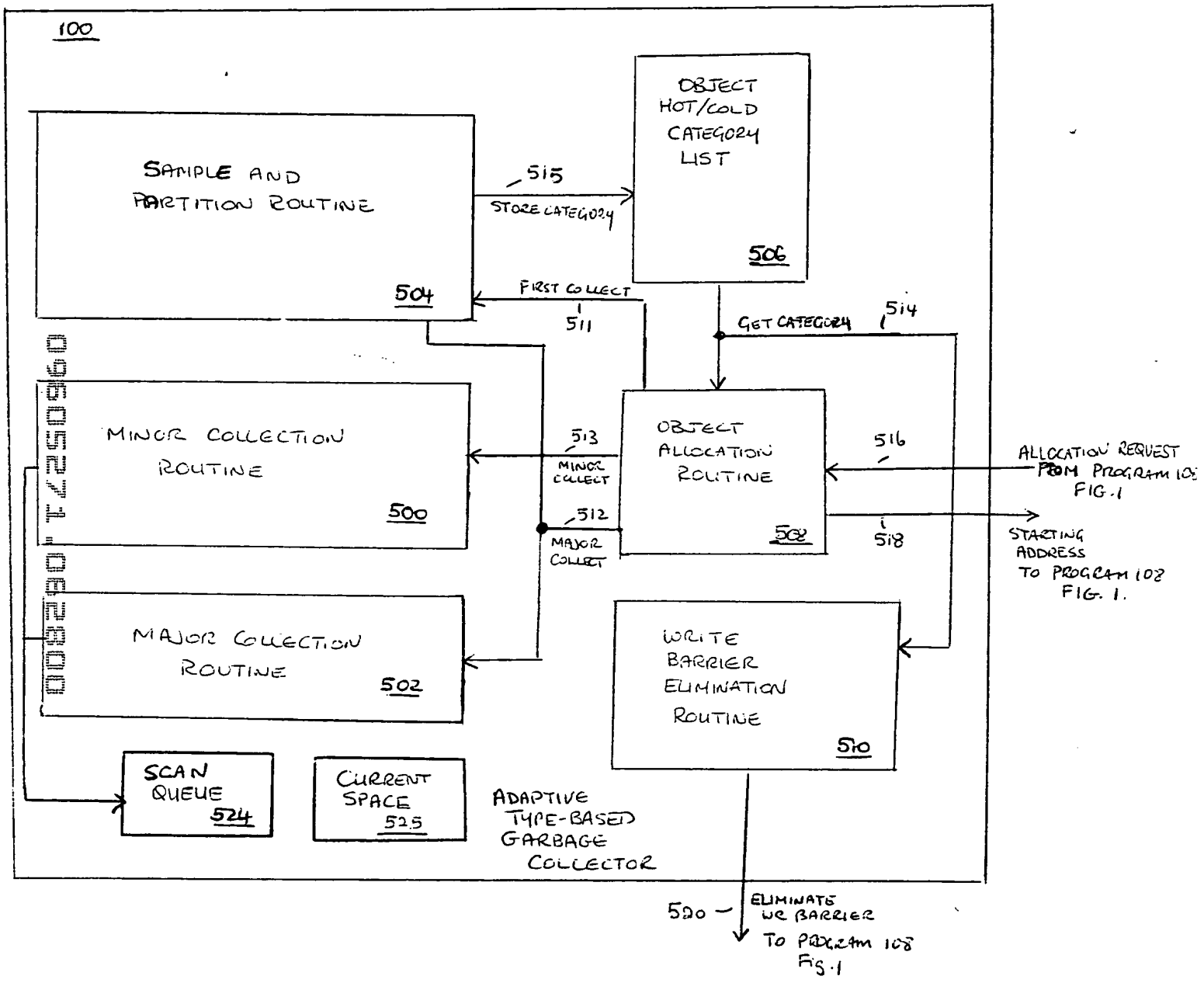

100
SAMPLE AND PARTITION ROUTINE
504
515
STORE CATEGORY
OBJECT HOT/COLD CATEGORY LIST
506
FIRST COLLECT
511
GET CATEGORY
514
MINOR COLLECTION ROUTINE
500
513
MINOR COLLECT
512
MAJOR COLLECT
OBJECT ALLOCATION ROUTINE
502
516
518
ALLOCATION REQUEST FROM PROGRAM 108 FIG. 1
STARTING ADDRESS TO PROGRAM 108 FIG. 1.
MAJOR COLLECTION ROUTINE
502
WRITE BARRIER ELIMINATION ROUTINE
510
SCAN QUEUE
524
CURRENT SPACE
525
ADAPTIVE TYPE-BASED GARBAGE COLLECTOR
520
ELIMINATE WR BARRIER
TO PROGRAM 108 FIG. 1

FIG. 5A

08820960-042504

506

OBJECT TYPE = 1 OBJECT CATEGORY = COLD	530
OBJECT TYPE = 2 OBJECT CATEGORY = COLD	
OBJECT TYPE = 3 OBJECT CATEGORY = HOT	
OBJECT TYPE = 4 OBJECT CATEGORY = HOT	
OBJECT TYPE = 5 OBJECT CATEGORY = COLD	
OBJECT TYPE = 6 OBJECT CATEGORY = HOT	
OBJECT TYPE = 7 OBJECT CATEGORY = HOT	

FIG. 5B

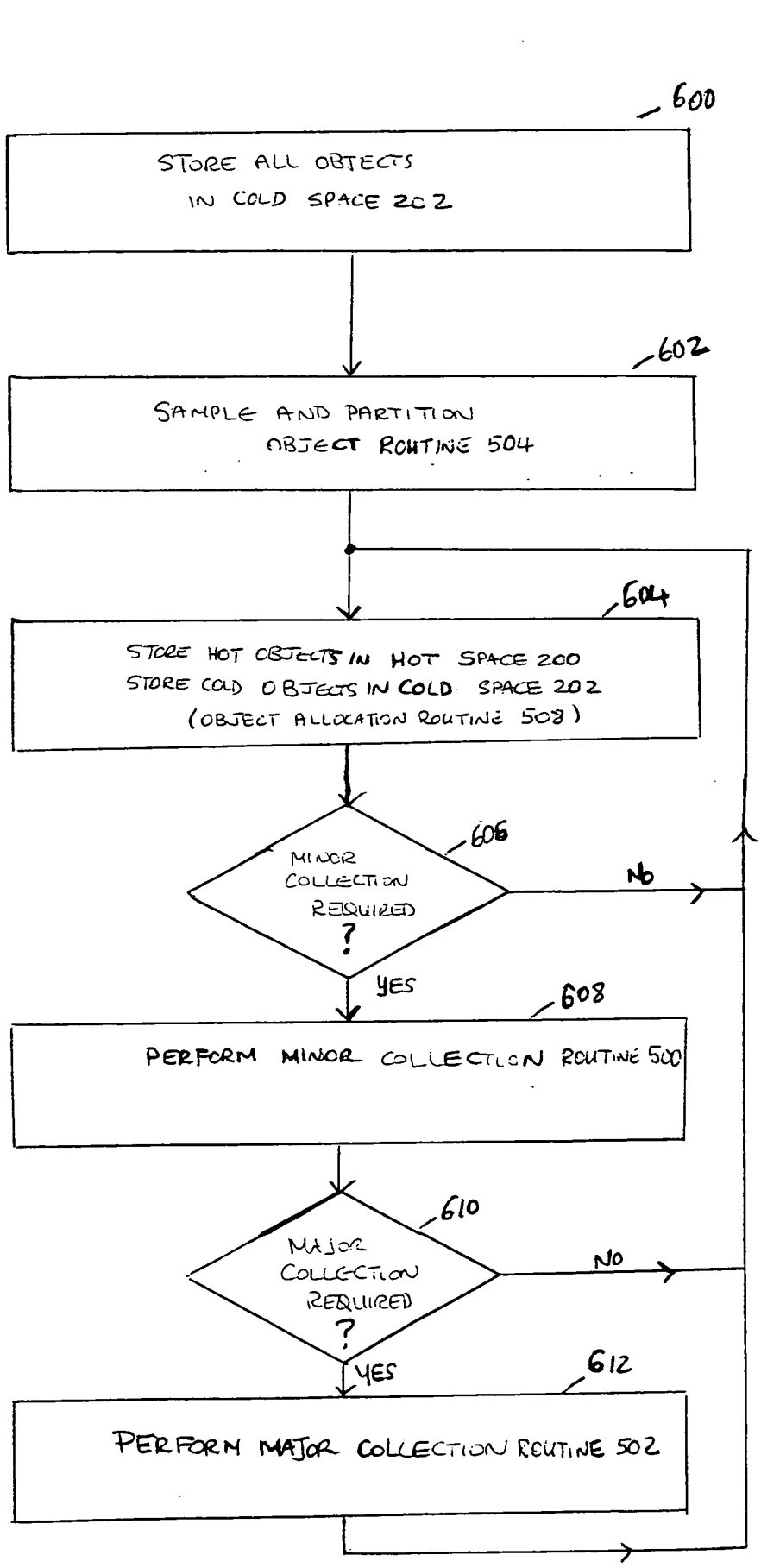

100
600
STORE ALL OBJECTS IN COLD SPACE 202
602
SAMPLE AND PARTITION OBJECT ROUTINE 504
604
STORE HOT OBJECTS IN HOT SPACE 200
STORE COLD OBJECTS IN COLD SPACE 202
(OBJECT ALLOCATION ROUTINE 508)
606
MINOR COLLECTION REQUIRED ?
NO
YES
608
PERFORM MINOR COLLECTION ROUTINE 500
610
MAJOR COLLECTION REQUIRED ?
NO
YES
612
PERFORM MAJOR COLLECTION ROUTINE 502

FIG. 6

0960527.060800

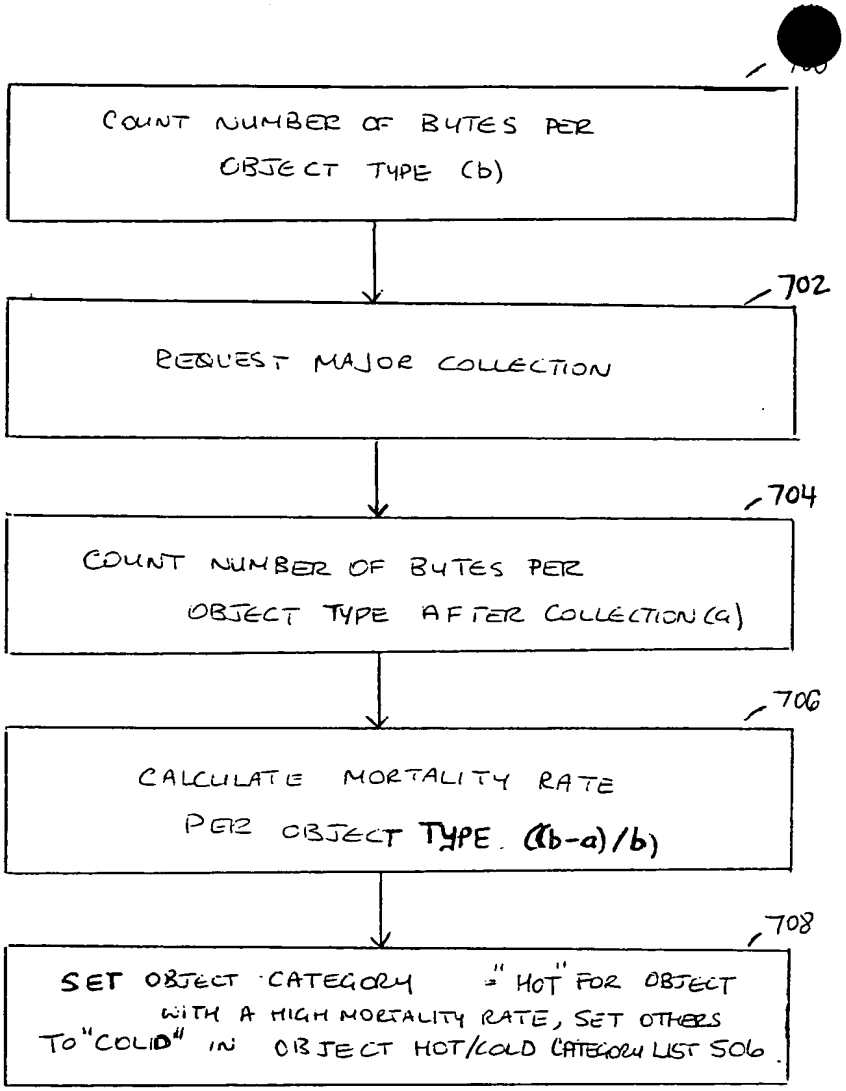
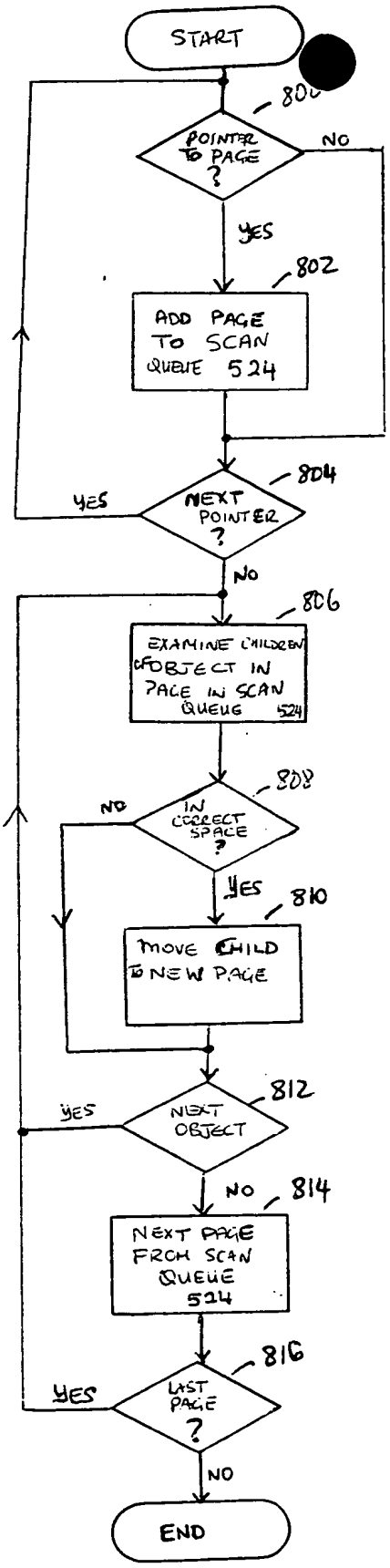


FIG. 7

0960527.0960900



500, 502

FIG. 8

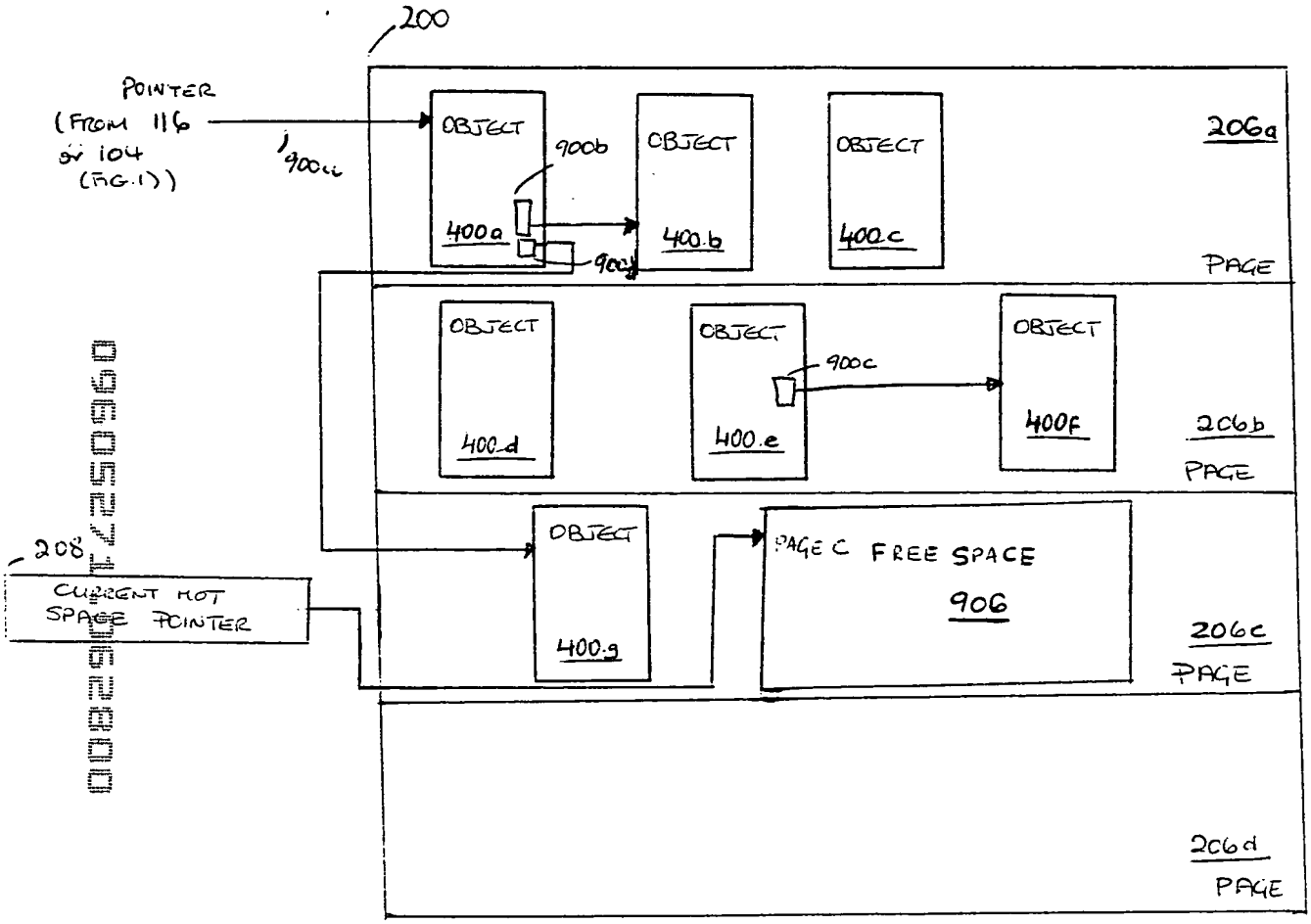

200
POINTER
(FROM 116
or 104
(FIG. 1))
900a
OBJECT
400a
900b
OBJECT
400.b
OBJECT
400.c
206a
PAGE
900d
OBJECT
400.d
OBJECT
400.e
900c
OBJECT
400F
206b
PAGE
208
CURRENT HOT
SPACE POINTER
OBJECT
400.g
PAGE C FREE SPACE
906
206c
PAGE
206d
PAGE

FIG. 9A

Docket: 06502.0800

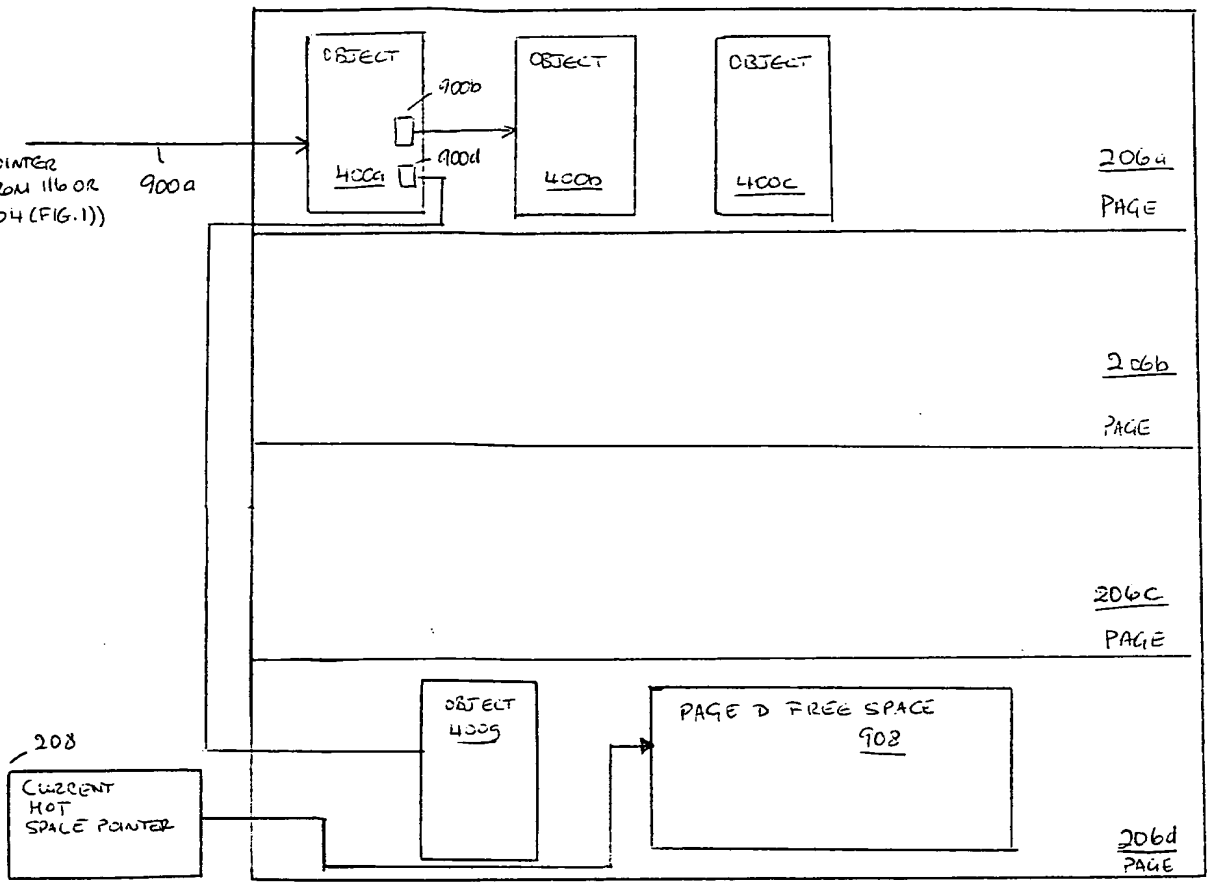


FIG. 9B

Oracle Ex. 2150 p. 9

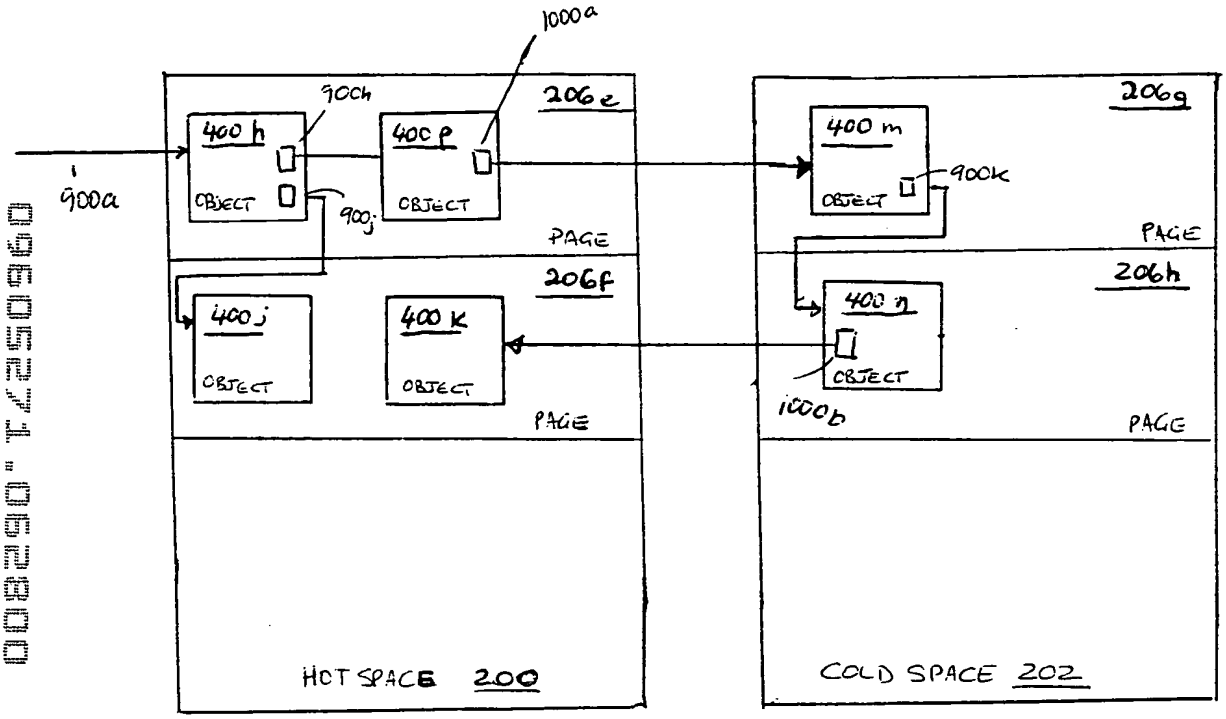


FIG. 10

09052701.062800

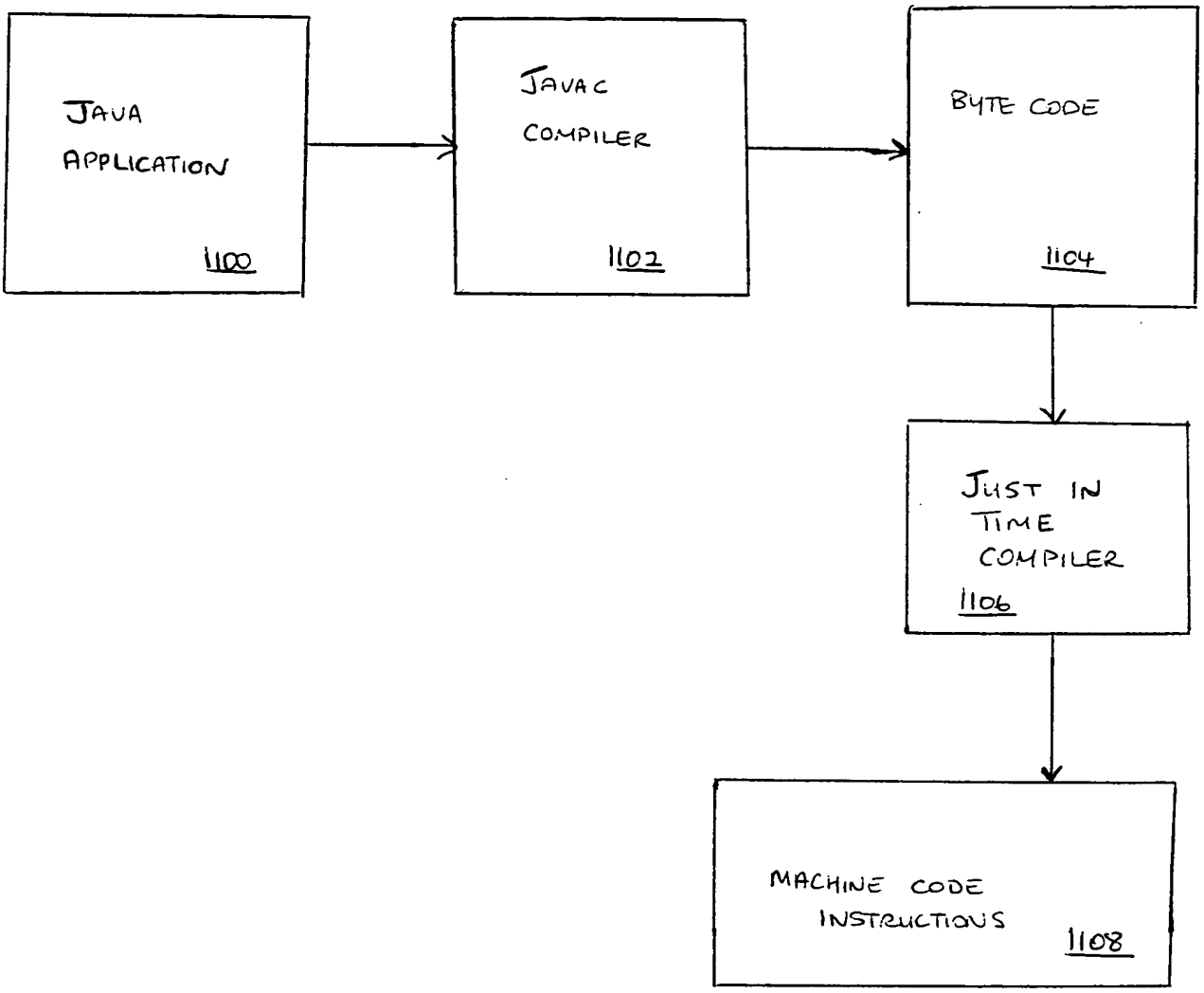


FIG. 11

0960527-062800

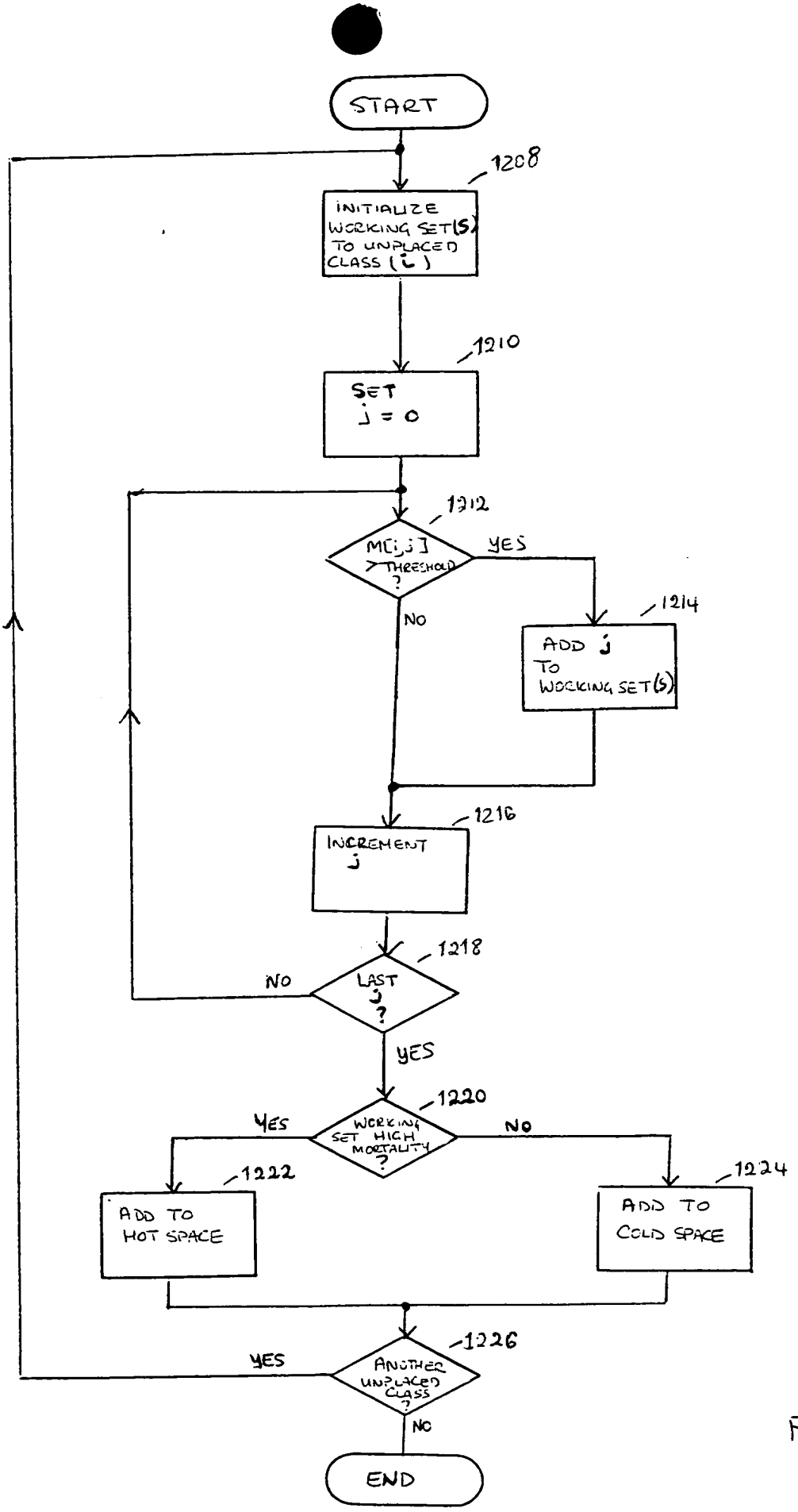


FIG 12A

0050270.050200

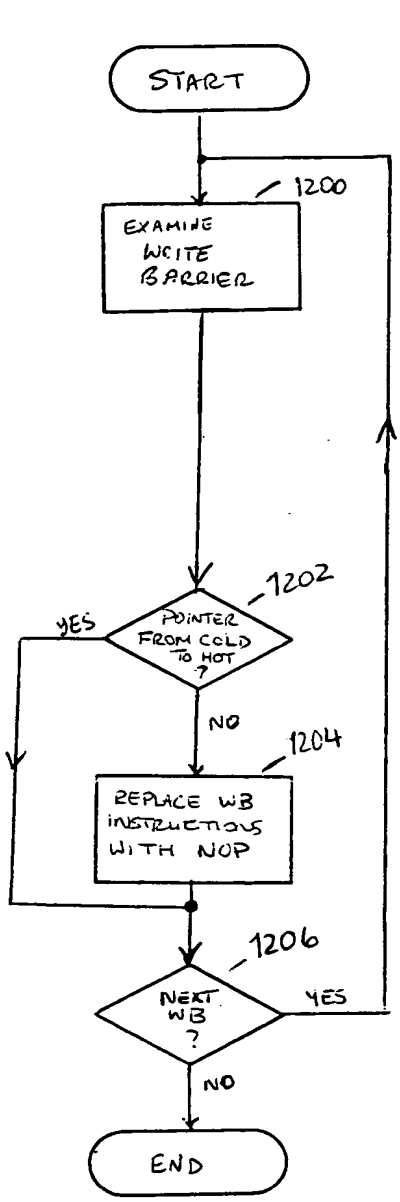


FIG. 12B

0960800 "2597 0960

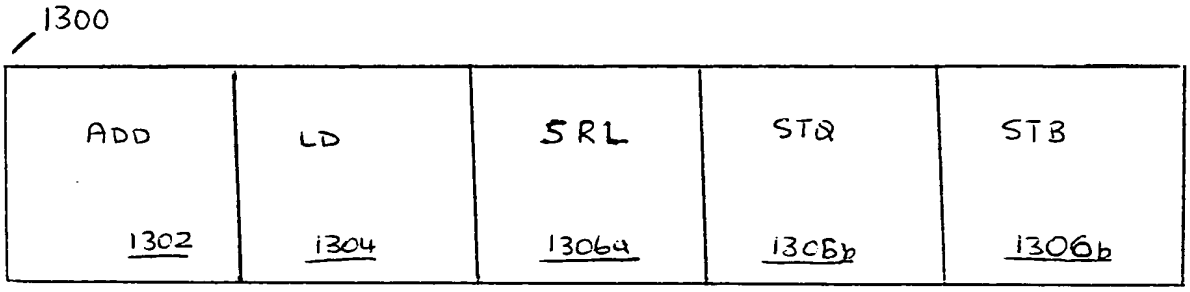


FIG. 13A

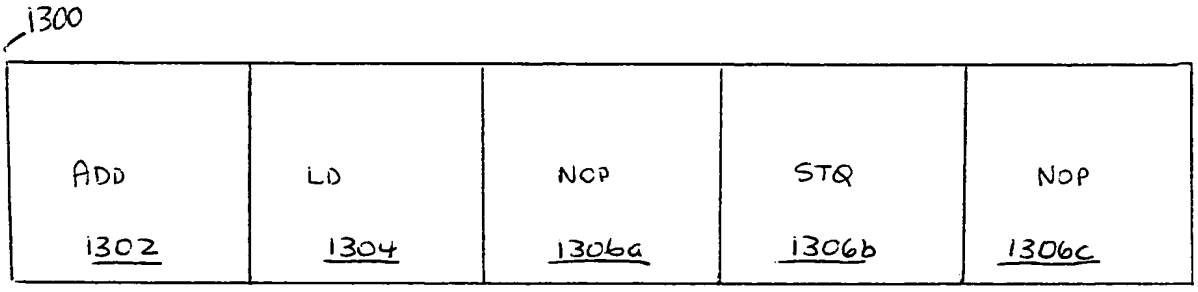


FIG. 13B

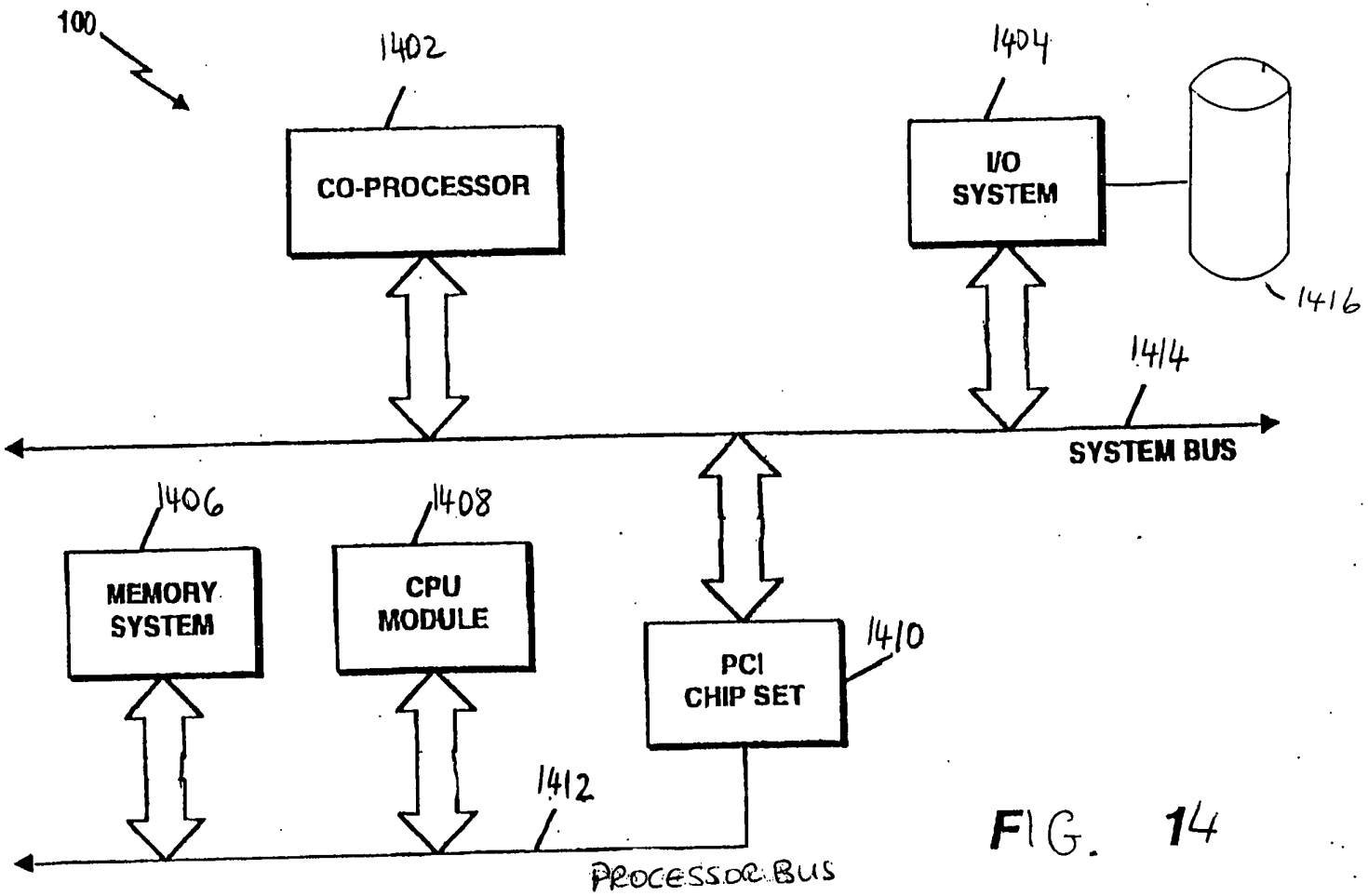

100
1402
CO-PROCESSOR
1404
I/O SYSTEM
1416
1414
SYSTEM BUS
1406
MEMORY SYSTEM
1408
CPU MODULE
1410
PCI CHIP SET
1412
PROCESSOR BUS

FIG. 14